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Exercise - I (Conceptual Questions) Build Up Your Understanding

HISTORY OF TAXONOMY

1. According to Whittaker, BGA are included in:-
(1) Mycota (2) Protista
(3) Plantae (4) Monera

2. Kingdom Monera comprises the :-
(1) Plants of economic importance
(2) All the plants studied in botany
(3) Prokaryotic organisms
(4) Plants of Thallophyta group

3. Whittaker is famous for :-
(1) Two kingdom classification
(2) Four kingdom classification
(3) Five kingdom classification
(4) Distinguishing in Bacteria & blue gree Algae

4. System of classification proposed by Linnaeus was:-
(1) Artificial (2) Natural
(3) Sexual (4) (1) and (3) both

5. The group "Plantae" proposed by Whittaker includes:-
(1) Pteridophytes (2) Gymnosperms
(3) Angiosperms (4) All the above

6. In Whittaker's five kingdom classification, eucaryotes were assigned to :-
(1) All the five kingdom
(2) Only four of the five kingdoms
(3) Only three kingdom
(4) Only one kingdom

7. Carolus Linnaeus classified plant kingdom on the basis of :-
(1) Floral morphology
(2) Overall morphology of plants
(3) Type of sexual reproduction
(4) Anatomical character

8. First plant classification was given by :–
(1) Linnaeus (2) John–Ray
(3) Aristotle (4) Darwin

9. "Systema Naturae" book was written by:-
(1) Angler and Prantle (2) Darwin
(3) Linnaeus (4) Oswald - Tippo

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10. According to Whittaker kingdom protista includes:-
(1) Prokaryotes
(2) Unicellular eukaryotes
(3) Slime molds & protozoa
(4) Multicellular & eukaryotes

KINGDOM – MONERA

11. Infoldings of plasma membrane in bacteria are called as :-
(1) Episomes (2) Plasmid
(3) Pili (4) Mesosomes

12. The organisms participating most actively in nitrogen cycle in nature are :-
(1) Bacteria (2) Legumes
(3) Parasitic algae (4) Fungi

13. Heterocyst is a structure which is associated with
(1) Reproduction (2) Respiration
(3) Nitrogen fixation (4) Locomotion

14. *Trichodesmium erythraeum* which imparts red colour to sea water of red sea is a :
(1) Cyanobacterium (2) Red Algae
(3) Diatom (4) Red Coral

15. Archaebacterial cell lacks :-
(1) Peptidoglycan
(2) DNA
(3) Ribosomes
(4) Branched Chain Lipids

16. Most common method of reproduction in prokaryotes :-
(1) Budding (2) Binary fission
(3) Transduction (4) Conjugation

17. Harmful activity of Blue green algae is:-
(1) Denitrification
(2) Water - bloom
(3) Increase alkalinity of soil
(4) Decrease fertility of soil

18. The function of mesosome in prokaryotes is:-
(1) Aerobic respiration
(2) Cell wall formation
(3) Both (1) and (2)
(4) N_2 - fixation

19. During rainy season ground surface become slippery due to:-
(1) Fungi (2) Blue green algae
(3) Bryophytes (4) Gymnosperm

20. Photosynthesis of Blue green algae is:-
(1) Oxygenic
(2) Non oxygenic
(3) Both oxygenic and non oxygenic
(4) None

21. Which of the following is the only group of organisms capable of using inorganic compounds as source of energy ?
(1) Fungi
(2) Chemo autotrophs
(3) Both the above
(4) None of the above

22. Link between prokaryotes and multicellular eukaryotes :–
(1) Cyanobacteria (2) Protista
(3) Fungi (4) Plants

23. Which structure of prokaryotes is analogous to lysosome ?
(1) Mesosome
(2) Genophore
(3) Periplasmic space
(4) Perinuclear space

24. Which of the following performs respiration with the help of plasma membrane ?
(1) Bacteria (2) Algae
(3) Fungi (4) All the above

25. Richest source of bacteria is : -
(1) Air (2) Soil
(3) Water (4) Milk

26. The most primitive monerans are :-
(1) Archaebacteria
(2) Eubacteria
(3) Filamentous bacteria
(4) Cyanobacteria

27. Organisms which obtain energy by the oxidation of reduced inorganic compounds are called
(1) Photo autotrophs (2) Chemo autotrophs
(3) Saprozoic (4) Heterotrophs

28. Which bacteria are utilized in Gobar gas plant?
(1) Methanogens
(2) Nitrifying bacteria
(3) Ammonifying bacteria
(4) Denitrifying bacteria

29. Plasmid are
(1) Virus
(2) New types of micro organism
(3) Extra chromosomal genetic material of bacteria
(4) Essential bacterial genetic materials

30. A free living aerobic bacteria capable of fixing nitrogen is
(1) *Azotobactor*
(2) *Rhizobium*
(3) *Clostridium botulinum*
(4) *Streptomyces*

31. Wine turns sour becasue of :-
(1) Heat
(2) Aerobic bacteria
(3) Anaerobic bacteria
(4) Exposure to the light

32. Which one of the following fixes CO_2 in to carbohydrates ?
(1) *Rhizobium* (2) *E.coli*
(3) *Bacillus* (4) *Rhodospirillum*

33. Antibiotics are mostly obtained from :-
(1) Bacteria (2) Viruses
(3) Fungi (4) Angiosperm

34. The main difference between gram +ve and gram –ve resides in the composition of :-
(1) Cilia (2) Cell-wall
(3) Cell-membrane (4) Cytoplasm

35. Free living nitrogen-fixing bacteria are found in-
(1) Air (2) Soil
(3) Root nodules (4) None of above

36. Cell membrane of bacteria is made up of -
(1) Cellulose and lipid
(2) Chitin
(3) Lipid + Protein
(4) Protein and Cellulose

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37. Which organism is most useful for soil fertility ?
(1) Bryophyta (2) Fungi
(3) Bacteria (4) Bacteriophage

38. Bacterial flagella are made of-
(1) Carbohydrate (2) Lipid
(3) Protein (4) Amide

39. The mode of the nutrition of bacteria is usually-
(1) Photo autotrophic
(2) Chemo autotrophic
(3) Heterotrophic and autotrophic
(4) None

40. Fertility of soil is increased by-
(1) Nitrogen - fixing bacteria
(2) Denitrifying bacteria
(3) Plasmalemma
(4) Cell membrane

41. Plant pathogenic bacteria are :-
(1) Gram ⊕ (2) Gram Θ
(3) Both (4) None

42. Souring of milk is due to -
(1) Aerobic bacteria
(2) Anaerobic bacteria
(3) Both
(4) None

43. At which place bacteria are not found
(1) Soil (2) Ice
(3) Sea (4) Distilled water

44. Halophile are____
(1) Those can live at low pH
(2) Those can live at high salt concentration
(3) Those can live at high pressure
(4) Those can live at high light intensity

45. The cyanobacteria are also referred to as_?
(1) Slime moulds
(2) Blue green algae
(3) Decomposer protist
(4) Cell wall less prokaryote

46. Besides paddy fields, cyanobacteria are also found inside vegetative part of:
(1) *Psilotum* (2) *Pinus*
(3) *Cycas* (4) *Equisetum*

47. Cyanobacteria are____
(1) Chemosynthetic
(2) Oxygenic photosynthetic
(3) Anaerobic
(4) Facultative anaerobic

KINGDOM-PROTISTA

48. "Golden Algae" is the common name of Algae belonging to :-
(1) Chrysophyta (2) Pyrrophyta
(3) Euglenophyta (4) Cyanophyta

49. Armoured cell wall and biflagellated cells are characteristic of :-
(1) Chrysophyta (2) Pyrrophyta
(3) Euglenophyta (4) Cyanophyta

50. Oils and Leucosine are characteristic stored food in :-
(1) Dinoflagellates (2) Euglenoids
(3) Diatoms (4) None

51. Armoured algae are :-
(1) Dinoflagellates (2) Euglenoids
(3) Red algae (4) Cyanobacteria

52. The diatoms do not easily decay like most of the other Algae because:-
(1) They have water proof cells
(2) Their walls are mucilagenous
(3) They have highly siliceous wall
(4) They are non living

53. "Keiselgurh" a heat resistant material is obtained from :-
(1) Red Algae (2) Brown Algae
(3) Diatoms (4) Fungi

54. The diatomaceous earth is used to insulate boilers and steam pipes because:-
(1) The wall of diatoms is deposited with calcium
(2) The diatomaceous earth is cheap
(3) It is a good conductor of heat
(4) The wall of diatoms is made of silica

55. Shell of diatoms is made up of :–
(1) Silica
(2) Calcium carbonate
(3) Keratin
(4) Calcium oxalate

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56. "Diatomite" (Keiselgurh) is obtained from:–
(1) Myxophyceae (2) Chrysophyta
(3) Phaeophyceae (4) Rhodophyceae

57. Most characteristic feature of diatoms is :–
(1) Pigments
(2) Stored food
(3) Cell wall
(4) Non oxygenic photosynthesis

58. Taxonomically the most controversial group is–
(1) Dinoflagellates (2) Diatoms
(3) Euglenoids (4) Prokryote

59. Decomposer protists are :-
(1) Diatoms (2) Dinoflagellates
(3) Slime moulds (4) Euglenoid

60. The dead remains of diatoms are known as:-
(1) Coenobium (2) Sporangia
(3) Kieselgurh (4) Sporocarp

61. Taxonomists feel difficulty in classification of-
(1) Procaryotes
(2) Unicellular eucaryotes
(3) Plants
(4) Animals

62. Which of the following unicellular algae reproduce by auxospores, have silicified cell wall and store food in the form of fats, leucosine and chrysolaminarin ?
(1) Diatoms (2) Red algae
(3) Dinoflagellates (4) Euglenoids

63. Paramylum is stored food of :-
(1) Dinoflagellate (2) Euglenoid
(3) Diatom (4) Slime mould

64. The most efficient locomotion in protists is through :-
(1) Pseudopodia (2) Flagella
(3) Cilia (4) Tentacles

65. Organism of which kingdom feed like animals and perform photosynthesis like plants :-
(1) Monera (2) Protista
(3) Mycota (4) Animalia

66. "Fire algae" belongs to group :-
(1) Pyrrophyta (2) Chrysophyta
(3) Euglenophyta (4) Rhodophyta

67. Slime mould is known as naked fungi.
(1) Cell membrane absent
(2) Cell wall absent
(3) Cell wall and cell membrane absent
(4) Never naked

68. Dinoflagellates are called fire algae due to which character :-
(1) They appear like fire due to pigments
(2) They produce fire due to friction
(3) They occur on burnt places
(4) They show bioluminescence

69. Toxins (Saxitoxins) secreted by some dinoflagellates enter the body of human beings through food chain and result in :-
(1) Madness (2) Paralysis
(3) Syphilis (4) Plague

70. Stored food of Diatoms :-
(1) Leucosin (2) Starch
(3) Floridian starch (4) Glycogen

71. Dead remains of diatoms at sea bed are called:-
(1) Keiselgurh (2) Peat
(3) Coral reefs (4) Sporopollenin

72. Protists include :
(1) Unicellular Eukaryotes
(2) Prokaryotes
(3) Multicellular eukaryotes
(4) Multicellular prokaryotes

73. Which of the following eukaryotes are devoid of histone proteins ?
(1) Golden algae (2) Euglenoids
(3) Fire algae (4) Slime Mould

74. Diatoms perform which type of movement in water :-
(1) Swimming (2) Amoeboid
(3) Floating (4) Ciliary

75. Protist used for the construction of sound proof rooms, is -
(1) Dinoflagellate (2) Diatoms
(3) Euglenoids (4) Zooflagellates

76. Auxospores are formed by -
(1) Diatoms (2) Euglenoids
(3) Dinoflagelates (4) bacteria

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77. Protists which are diploid reproduce sexually by the process of -
(1) Zygotic meiosis (2) Cyst formation
(3) Binary fission (4) Gametic meiosis

78. 'Red tides' are produced by -
(1) Red algae (2) Dinoflagellates
(3) Diatoms (4) Brown algae

KINGDOM – FUNGI

79. Fungal hyphae penetrate hard cell walls of their hosts with the help of:-
(1) Enzymes (2) Hormones
(3) Sharp tips (4) Sugar Exudates

80. A fungus completing its life cycle on a single host is known as:-
(1) Dikaryotic (2) Autoecious
(3) Heterocious (4) Heterothallic

81. Which of the following secretes toxins during storage conditions of crop plants ?
(1) *Aspergillus* (2) *Penicillium*
(3) *Fusarium* (4) *Colletotrichum*

82. Which of the following characters indicate similarity between fungi and animals ?
(1) Heterotrophic nutrition
(2) Type of stored food
(3) Presence of chitin
(4) All the above

83. The sac fungi belongs to :-
(1) Ascomycetes (2) Basidiomycetes
(3) Phycomycetes (4) Deuteromycetes

84. *Neurospora*, which is popularly known as *Drosophilla* of plant kingdom, belongs to :-
(1) Phycomycetes
(2) Ascomycetes
(3) Basidiomycetes
(4) Deuteromycetes

85. The basidiomycetes includes :-
(1) Rusts (2) Smuts
(3) Mushrooms (4) All the above

86. Which of the following causes wheat rust disease?
(1) A red alga (2) A green alga
(3) A fungus (4) Mycoplasma

87. Sexual cycle is absent in :-
(1) Phycomycetes
(2) Deuteromycetes
(3) Ascomycetes
(4) Basidiomycetes

88. *Penicillium* fungi belong to class :-
(1) Zygomycetes (2) Oomycetes
(3) Deuteromycetes (4) Ascomycetes

89. The fungi are :-
(1) Autotrophic
(2) Holotrophic
(3) Chemotrophic
(4) Heterotrophic

90. All fungi are :-
(1) With chlorophyll
(2) Without chlorophyll
(3) With carotene
(4) Wall less

91. In class phycomycetes the mycelium is :-
(1) Coenocytic and aseptate
(2) Coenocytic and septate
(3) Uninucleate and aseptate
(4) Multinucleate and septate

92. Coenocytic mycelium is found in :-
(1) *Rhizopus* (2) *Mucor*
(3) *Penicillium* (4) Both 1 and 2

93. Stored food material of fungi :-
(1) Cellulose
(2) Starch
(3) Glycogen and starch
(4) Glycogen and oil

94. The cell wall of Fungi is composed of:-
(1) Chitin (2) Cellulose
(3) Mucopeptide (4) Pseudomurein

95. The chief characteristic of class Ascomycetes is-
(1) Formation of spores
(2) Hyphae
(3) Formation of ascospores
(4) Formation of zoospores

96. Which is commonly called "*Drosophilla* of plant kingdom" ?
(1) *Morchella* (2) *Neurospora*
(3) *Rhizopus* (4) *Claviceps*

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97. Normally how many ascospores are formed in an ascus :-
(1) 4 - ascospores (2) 8 - ascospores
(3) 16 ascospores (4) 24 ascospores

98. Edible part in mushrooms is :-
(1) Basidiospores
(2) Mycelium
(3) Pseudomycelium
(4) Complete basidiocarp

99. Which scientist did work on rust disease ?
(1) Lederberg and tatum
(2) K.C. Mehata
(3) Blakeslee
(4) Wollman

100. Penicillin is obtained from:-
(1) *Chara* (2) *Penicillium*
(3) *Aspergillus* (4) *Albugo*

101. Cell wall of Chitin is found in :-
(1) Fungi (2) Bryophyta
(3) Bacteria (4) Angiosperms

102. The fungus without mycelium is :-
(1) *Phytophthora* (2) *Rhizopus*
(3) *Saccharomyces* (4) *Microsporum*

103. Indian scientist who worked on *Puccinia* :–
(1) J.C. Luthra (2) K.C. Mehta
(3) C.V. Subramanian (4) K.G. Mukherji

104. Pseudomycelium occurs in :–
(1) Muschroom (2) *Mucor*
(3) Bread mold (4) Yeast

105. Occurence of dikaryotic mycelium mainly is the characteristic of :–
(1) Myxomycetes (2) Phycomycetes
(3) Deuteromycetes (4) Basidiomycetes

106. Deuteromycetes are called 'Imperfect fungi' as :–
(1) They have no cell wall
(2) No mycelium
(3) No sexual reproduction
(4) No asexual reproduction

107. Fungi which requires two different hosts to complete it's life cycle is called as :–
(1) Homothallic (2) Heterothallic
(3) Heteroecious (4) Autoecious

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108. Aeciospores of *Puccinia* are produced on :–
(1) *Berberis* leaves (2) Wheat leaves
(3) Mustard leaves (4) *Raphanus* leaves

109. Absorptive mode of nutrition is found in :–
(1) Algae (2) Fungi
(3) Bryophytes (4) Euglenoids

110. Which of the following is called 'toad stools' ?
(1) All mushrooms
(2) Edible mushrooms
(3) Poisonous mushrooms
(4) None

111. Yeast grows more quickly in :–
(1) Salt water
(2) Sugar solution
(3) Double distilled water
(4) Marine water

112. Which of the following is a form class ?
(1) Deuteromycetes (2) Basidiomycetes
(3) Rhodophyceae (4) Euglenophyceae

113. Ergot fungi belongs to :–
(1) Ascomycetes (2) Basidiomycetes
(3) Phycomycetes (4) Deuteromycetes

114. Professor K.C. Mehta is known for his contribution in:-
(1) Bryology (2) Plant physiology
(3) Virology (4) Plant pathology

115. Fungi are ecologically important because :-
(1) They yield antibiotics
(2) They are used in genetic studies
(3) They function as decomposers
(4) All the above

116. Citric acid is obtained from
(1) *Streptomyces* (2) *Aspergillus*
(3) *Penicillium* (4) *Albugo*

117. In fungi lump of hyphae is referred to as :-
(1) Thallus (2) Haustorium
(3) Mycelium (4) Archegonia

118. Plant group which shows Heterotrophic mode of nutrition is :-
(1) Algae (2) Fungi
(3) Bryophytes (4) Pteridophytes

119. Sexual reproduction is absent in :-
(1) Phycomycetes (2) Deuteromycetes
(3) Zygomycetes (4) Basidiomycetes

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120. Non-septate mycelium occurs in :-
(1) Phycomycetes
(2) Ascomycetes
(3) Basidiomycetes
(4) Deuteromycetes

121. Basidiocarp is present in:-
(1) Basidiomycetes (2) Ascomycetes
(3) Deuteromycetes (4) Phycomycetes

122. All fungi are:-
(1) Symbionts (2) Parasites
(3) Saprophytes (4) Heterotrophs

123. Aspergillosis is caused by :–
(1) Virus (2) Bacteria
(3) Fungi (4) Mycoplasma

VIRUS, VIROIDS, LICHEN, MYCORRHIZA

124. Find the incorrect statements from the followings:-
(1) Growth, reproduction and consciousness are unique features of living organisms
(2) Growth and reproduction are defining characteristics of living organisms
(3) Metabolism, cellular organisation and consciousness are defining characters of livings
(4) Living organisms are self replicating, evolving and self regulating.

125. Which is a group of organisms in which reproduction is synonymous with growth :-
(1) *Amoeba*, bacteria and unicellular algae
(2) Algae, fungi and lichen
(3) Lower organisms
(4) Higher multicellular organisms

126. Why viruses did not find a place in classification?
(1) They are obligate parasities, cannot surive without host.
(2) Viruses are unicellular organisms so can not be included in livings.
(3) They are not truly living because they don't have cell structure.
(4) They can pass through the bacteria proof filter

127. Which of the followings is/are symbiotic associations between autotrophic and heterotrophic organisms only
(A) Mycorrhiza between fungi and roots of higher plants
(B) Lichen between phycobiont and mycobiont.
(C) Coralloid roots of *Cycas* having cyanobacteria
(D) Obligate association between *Pinus* roots and fungi making mycorrhizae.
(1) A & B (2) B & C
(3) A, B & C (4) A, B & D

128. Bacteriophages are made of both proteins and genetic material. Their genetic material is generally-
(1) ss DNA (2) ds DNA
(3) ss RNA (4) ds RNA

129. Find the correct from the followings.
(1) T.O. Diener discovered a new infectious agent, smaller than virus and named them as prions.
(2) Viroids lack the protein coat and made of only free RNA
(3) The RNA of viroids is of high molecular weight
(4) Lichens are very good pollution indicators as they grow only in polluted areas.

130. Reproduction can not be taken as defining property of living because -
(1) Unicellular organisms reproduce by cell division.
(2) Multicellular organisms reproduce by both, asexual and sexual methods.
(3) Few organisms on the earth are of sterile nature also
(4) Reproduction property is present in all living organisms

131. Metabolism can be exhibited by ?
(1) Only plant
(2) Plant and animal both
(3) Plant, animal and fungi only
(4) Plant animal, fungi and microbes

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132. Metabolism can be defined as ?
(1) Sum total of all chemical reactions hapens out side the body.
(2) Chemical reactions take place in particular cells.
(3) Sum total of all chemical reactions occurring in living body.
(4) Sum total of all chemical reactions occurring outside the cells.

133. Stimulus can be ?
(1) Only physical type
(2) Only chemical type
(3) Only biological type
(4) All of the above

134. Living organisms can respond against ?
(1) Physical and chemical stimuli
(2) Chemical and biological stimuli
(3) Both (1) and (2)
(4) None of these

135. The property of self conscionsness can be observed?
(1) In non-vertebrates
(2) In vertebrates
(3) In human beings
(4) In all mammals

136. Match the column A with column B and find out the correct as shown ?

	Column-A	**Column-B**
a.	Pollution indicator component	p. Fungal
b.	Mycobiont	q. Viroid
c.	Potato spindle tuber disease	r. Lichen
d.	Obligate parasite	s. Virus

(1) a - r, b - p, c - s, d - q
(2) a - r, b - s, c - p, d - q
(3) a - s, b - r, c - p, d - q
(4) a - r, b - p, c - q, d - s

137. In lichen fungal component is responsible to provide?
(1) Shelter to phycobiont
(2) Mineral absorption
(3) Water absorption
(4) All of the above

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138. Consider the following characteristics :-
(A) Growth
(B) Reproduction
(C) Consciousness
(D) Cellular Organisation
Which of the above feature is/ are not the defining properties of are living organisms?
(1) A, B, C, D (2) A, B, C
(3) C, D (4) A, B

139. Which of the following can grow but cannot reproduce ?
(1) Single celled organisms
(2) Living organisms
(3) Non-livings only
(4) Both (1) & (3)

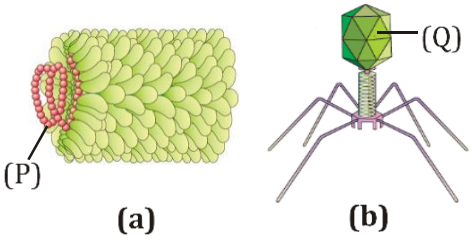
140. Twin characters of growth in organisms are
(1) Increase in mass
(2) Increases in number
(3) Increases in height
(4) Both (1) & (2)

141. The protein coat of viruses is called :
(1) Capsomeres (2) Capsid
(3) Sheath (4) Envelope

142. Lichens are :
(1) Symbiotic association between algae and fungi
(2) Pollution indicators
(3) Not placed in any kingdom by R.H. Whittaker
(4) All of these are correct

143. Phycobiont is a :
(1) algal, autotrophic component of mycorrhiza
(2) fungal, heterotrophic component of lichen
(3) fungal component of mycorrhiza
(4) algal, autotrophic component of lichen

144.



Identify the (a) & (b) figure and their (P) and (Q) part.

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(1) a - Tobacco Mosaic virus P → RNA
b - Bacteriophage Q → Head
(2) a - Bacteriophage P → RNA
b - Tobacco Mosaic virus Q → Head
(3) a - Potato Mosaic virus P → Head
b - Cyanophage Q → RNA
(4) a - Smallpox virus P → RNA
b - Influenza virus Q → Head

145. Choose the **incorrect** pair :-
(1) Virus – Nucleocapsid
(2) Viroids – Only RNA
(3) Lichen – Algae and fungi
(4) Mycorrhiza – BGA and higher plants

146. Which of the given organism(s) belong to kingdom protista according to five kingdom system?
(A) Virus (B) *Euglena*
(C) Viroids (D) Lichen
(1) A and B (2) C and D
(3) Only B (4) A and C

147. The transfer of genetic material from one bacterium to other bacterium from virus, is called:-
(1) Conjugation (2) Transduction
(3) Transformation (4) Crossing over

148. Read the following statements :
(i) Mycorrhiza is the symbiotic association between roots of higher plants and fungus.
(ii) Lichens are biological indicator for water pollution.
(iii) Viroids contain only low molecular weight DNA and protein.
(iv) W.M. Stanley crystallised TMV
Which of the above statements are correct:
(1) (i), (ii) and (iv) (2) (i) and (iv)
(3) (ii) and (iii) (4) (i) and (ii)

149. Which of the following benefit is not provided by fungi to symbiotic plant ?
(1) Protection from pathogen
(2) Availability of water
(3) Availability of phosphate
(4) Ability to fix nitrogen

150. Pseudoparenchymatous sheath formed around the root of symbiotic host plant is also known as_____
(1) Sheath (2) Mantle
(3) Cover (4) Hartig's Net

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EXERCISE-I (Conceptual Questions) ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	4	3	3	4	4	2	1	3	3	2	4	1	3	1	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	2	2	3	2	1	2	2	3	1	2	1	2	1	3	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	2	4	1	2	2	3	3	3	3	1	3	2	4	2	2
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	3	2	1	2	3	1	3	3	4	1	2	3	3	3	3
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	2	1	2	3	2	1	2	4	2	1	1	1	3	3	2
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	1	4	2	1	2	1	4	1	2	4	3	2	4	4	2
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	1	4	4	1	3	2	2	4	2	2	1	3	2	4	4
Question	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Answer	3	3	1	2	3	2	1	1	4	3	2	3	2	2	1
Question	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
Answer	1	4	3	2	1	3	4	2	2	3	4	3	4	3	3
Question	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
Answer	4	4	4	3	4	2	4	4	1	4	3	2	2	4	2

TG: @Chalnaayaaar

Exercise - II (Previous Year Questions) AIPMT/NEET

AIPMT 2006

1. The thalloid body of a slime mould (Myxomycetes) is known as :
(1) Fruiting body (2) Mycelium
(3) Protonema (4) Plasmodium

2. Curing of tea leaves is brought about by the activity of :
(1) viruses (2) fungi
(3) bacteria (4) mycorrhiza

3. The bacterium (*Clostridium botulinum*) that causes botulism is :
(1) a facultative aerobe
(2) an obligate aerobe
(3) a facultative anaerobe
(4) an obligate anaerobe

4. Two microbes found to be very useful in genetic engineering are :
(1) *Diplococcus* sp. and *Pseudomonas* sp.
(2) Crown gall bacterium and *Caenorhabditis elegans*
(3) *Escherichia coli* and *Agrobacterium tumefaciens*
(4) *Vibrio cholerae* and a tailed bacteriophage

AIPMT 2007

5. Which one of the following is a slime mould?
(1) *Anabaena* (2) *Rhizopus*
(3) *Physarum* (4) *Thiobacillus*

6. Which pair of the following belongs to Basidiomycetes ?
(1) *Morchella* and Mushrooms
(2) Birds' nest fungi and Puffballs
(3) Pufballs and *Claviceps*
(4) *Peziza* and Stinkhorns

7. Ergot of rye is caused by a species of :-
(1) *Claviceps* (2) *Phytophthora*
(3) *Uncinula* (4) *Ustilago*

8. One gene - one enzyme relationship was established for the first time in :-
(1) *Diplococcus pneumoniae*
(2) *Neurospora crassa*
(3) *Salmonella typhimurium*
(4) *Escherichia Coli*

TG: @Chalnaayaaar

9. Which of the following is a flowering plant with nodules containing filamentous nitrogen-fixing microorganism ?
(1) *Cicer arietinum*
(2) *Casuarina equisetifolia*
(3) *Crotalaria juncea*
(4) *Cycas revoluta*

10. Which one of the following pairs is wrongly matched?
(1) *Coliforms* – Vinegar
(2) *Methanogens* – Gobar gas
(3) *Yeast* – Ethanol
(4) *Streptomycetes* – Antibiotic

AIPMT 2008

11. *Thermococcus*, *Methanococcus* and *Methanobacterium* exemplify :-
(1) Bacteria whose DNA is relaxed or positively supercoiled but which have a cytoskeleton as well as mitochondria
(2) Bacteria that contain a cytoskeleton and ribosomes
(3) Archaebacteria that contain protein homologous to eukaryotic core histones
(4) Archaebacteria that lack any histones resembling those found in eukaryotes but whose DNA is negatively supercoiled.

12. In the light of recent classification of living organisms into three domains of life (bacteria, archaea and eukarya), which one of the following statements is true about archaea ?
(1) Archaea completely differ from both prokaryotes and eukaryotes
(2) Archaea completely differ from prokaryotes
(3) Archaea resemble eukarya in all respects
(4) Archaea have some novel features that are absent in other pyokaryotes and eukaryotes

13. Cellulose is the major component of cell walls of:-
(1) *Pseudomonas* (2) *Saccharomyces*
(3) *Pythium* (4) *Xanthomonas*

14. Bacterial leaf blight of rice is caused by a species of :-
(1) *Alternaria* (2) *Erwinia*
(3) *Xanthomonas* (4) *Pseudomonas*

15. Nitrogen flxation in root nodules of Alnus is brought about by :-
(1) *Frankia* (2) *Azorhizobium*
(3) *Bradyrhizobium* (4) *Clostridium*

AIPMT 2009

16. Oxygenic photosynthesis occurs in :-
(1) *Chlorobium* (2) *Chromatium*
(3) *Oscillatoria* (4) *Rhodospirillum*

17. Which one is the wrong pairing for the disease and its causal organism ?
(1) Root-knot of vegetables – *Meloidogyne sp*
(2) Late blight of potato – *Alternaria solani*
(3) Black rust to wheat – *Puccinia graminis*
(4) Loose smut of wheat – *Ustilago nuda*

18. Which one of the following is commonly used in transfer of foreign DNA into crop plants ?
(1) *Penicillium expansum*
(2) *Trichoderma harzianum*
(3) *Meloidogyme incognita*
(4) *Agrobacterium tumefaciens*

AIPMT 2010

19. Some hyperthermophilic organisms that grow in highly acidic (pH2) habitats belong to the two groups:
(1) Liverworts and yeasts
(2) Eubacteria and archaea
(3) Cyanobacteria and diatoms
(4) Protists and mosses

20. Single-celled eukaryotes are included in :-
(1) Monera (2) Protista
(3) Fungi (4) Archaea

21. Membrane-bound organelles are absent in:
(1) *Plasmodium* (2) *Saccharomyces*
(3) *Streptococcus* (4) *Chlamydononas*

22. One of the free-living, anaerobic nitrogen-fixer is:
(1) *Azotobacter* (2) *Beijernickia*
(3) *Rhodospirillum* (4) *Rhizobium*

23. Ringworm in humans is caused by :
(1) Viruses (2) Bacteria
(3) Fungi (4) Namatodes

24. The common nitrogen-fixer in paddy fields is:
(1) *Frankia* (2) *Rhizobium*
(3) *Azospirillum* (4) *Oscillatoria*

25. Black (stem) rust of wheat is caused by :
(1) *Ustilago nuda*
(2) *Puccinia graminis*
(3) *Xanthomonas oryzae*
(4) *Alternaria solani*

26. Select the correct combination of the statement (a-d) regarding the *characteristics* of certain organisms :
(a) Methanogens are Archaebacteria which produce methane in marshy areas
(b) *Nostoc* is filamentous blue-green alga which fixes atmospheric nitrogen
(c) Chemoysynthetic autotrophic bacteria synthesize cellulose from glucose
(d) Mycoplasma lack a cell wall and can survive without oxygen
The correct statements are :
(1) (a), (b), (c) (2) (b), (c), (d)
(3) (a), (b), (d) (4) (b), (c)

AIPMT 2011

27. A prokaryotic autotrophic nitrogen fixing symbiont is found in :-
(1) *Alnus* (2) *Cycas*
(3) *Cicer* (4) *Pisum*

28. Which one of the following is not a biofertilizer ?
(1) *Agrobacterium* (2) *Rhizobium*
(3) *Nostoc* (4) Mycorrhiza

29. An organism used as a biofertilizer for raising soyabean crop is :-
(1) *Azotobacter* (2) *Azospirillum*
(3) *Rhizobium* (4) *Nostoc*

TG: @Chalnaayaaar

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30. Ethanol is commercally produced through a particular species of :-
(1) *Saccharomyces*
(2) *Clostridium*
(3) *Trichoderma*
(4) *Aspergillus*

31. Nitrifying bacteria :-
(1) Oxidize ammonia to nitrates
(2) Convert free nitrogen to nitrogen compounds
(3) Convert proteins into ammonia
(4) Reduce nitrates to free nitrogen

32. Which one of the following is a wrong matching of a microbe and its industrial product, while the remaining three are correct ?
(1) *Aspergillus niger* - citric acid
(2) Yeast - Statins
(3) *Acetobacter aceti* - acetic acid
(4) *Clostridium butylicum* - lactic acid

33. The pathogen *Microsporum* responsible for ringworm disease in humans belongs to the same Kingdom of organisms as that of :
(1) *Ascaris,* a round worm
(2) *Taenia,* a tapeworm
(3) *Wuchereria,* a filarial worm
(4) *Rhizopus*, a mould

AIPMT 2012

34. Maximum nutritional diversity is found in the group :-
(1) Monera (2) Plantae
(3) Fungi (4) Animalia

35. Which one of the following is common to multicellular fungi, filamentous algae and protonema of mosses :-
(1) Mode of Nutrition
(2) Multiplication by fragmentation
(3) Diplontic life cycle
(4) Members of kingdom Plantae

36. Nuclear membrane is absent in :-
(1) *Volvox* (2) *Nostoc*
(3) *Penicillium* (4) *Agaricus*

TG: @Chalnaayaaar

37. Which one of the following does not differ in *E.coli* and *Chlamydomonas* ?
(1) Cell wall
(2) Cell membrane
(3) Ribosomes
(4) Chromosomal Organization

38. Which one of the following is wrong statement ?
(1) Phosphorus is a constituent of cell membranes, certain nucleic acids and all proteins
(2) Nitrosomonas and Nitrobacter are chemoautotrophs
(3) *Anabaena* and *Nostoc* are capable of fixing nitrogen in free-living state also
(4) Root nodule forming nitrogen fixers live as aerobes under free-living conditions

39. Yeast is used in the production of :-
(1) Bread and beer
(2) Cheese and butter
(3) Citric acid and lactic acid
(4) Lipase and pectinase

40. The cyanobacteria are also referred to as :-
(1) Slime moulds (2) Blue green algae
(3) Protists (4) Golden algae

41. Which one single organism or the pair of organisms is correctly assigned to its or their named taxonomic group ?
(1) *Yeast* used in making bread and beer is a fungus
(2) *Nostoc* and *Anabaena* are examples of protista
(3) *Paramecium* and *Plasmodium* belong to the same kingdom as that of *Penicilium*
(4) Lichen is a composite organism formed from the symbiotic association of an algae and a protozoan

42. Them most abundant prokaryotes helpful to humans in making curd from milk and in production of antibiotics are ones categorised as:
(1) Chemosynthetic autotrophs
(2) Heterotrophic bacteria
(3) Cyanobactaria
(4) Archaebacteria

43. *Monascus purpureus* is a yeast used commercially in the production of :-
(1) citric acid
(2) blood chlolestrol lowering statins
(3) ethanol
(4) streptokinase for removing clots from the blood vessels.

44. How many organisms in the list given below are *autotrophs*?
Lactobacillus, Nostoc, Chara, Nitrosomonas, Nitrobacter, Streptomyces, Saccharomyces, Trypanosoma, Porphyra, Wolfia
(1) Six (2) Three
(3) Four (4) Five

45. In the five-kingdom classification, *Chlamydomonas* and *Chlorella* have been included in :
(1) Plantae (2) Monera
(3) Protista (4) Algae

NEET-UG 2013

46. Which of the following are likely to be present in deep sea water ?
(1) Saprophytic fungi (2) Archaebacteria
(3) Eubacteria (4) Blue-green algae

47. A good producer of citric acid is :
(1) *Saccharomyces* (2) *Aspergillus*
(3) *Pseudomonas* (4) *Clostridium*

48. Besides paddy fields, cyanobacteria are also found inside vegetative part of :
(1) *Psilotum* (2) *Pinus*
(3) *Cycas* (4) *Equisetum*

49. Select the wrong statement :
(1) *Chlamydomonas* exhibits both isogamy and anisogamy and *Fucus* shows oogamy
(2) Isogemetes are similar in structure, function and behaviour
(3) Anisogametes differ either in structure, function or behaviour
(4) In Oomycetes female gamete is smaller and motile, while male gamete is larger and non-motile

50. Which of the following represents maximum number of species among global biodiversity?
(1) Mosses and Ferns (2) Algae
(3) Lichens (4) Fungi

51. Pigment-containing membranous extensions in some cyanobacteria are :
(1) Chromatophores (2) Heterocysts
(3) Basal bodies (4) Pneumatophores

AIPMT 2014

52. Five kingdom system of classification suggested by R.H. Whittaker is **not** based on :
(1) Presence or absence of a well defined nucleus.
(2) Mode of reproduction.
(3) Mode of nutrition.
(4) Complexity of body organisation.

53. Which one of the following fungi contains hallucinogens ?
(1) *Morchella esculenta*
(2) *Amanita muscaria*
(3) *Neurospora sp.*
(4) *Ustilago sp.*

54. Archaebacteria differ from eubacteria in :
(1) Cell membrane
(2) Mode of nutrition
(3) Cell shape
(4) Mode of reproduction

55. Anoxygenic photosynthesis is characteristic of :
(1) *Rhodospirillum* (2) *Spirogyra*
(3) *Chlamydomonas* (4) *Ulva*

56. Which of the following shows coiled RNA strand and capsomeres?
(1) Polio virus
(2) Tobacco masaic virus
(3) Measles virus
(4) Retrovirus

57. Transformation was discovered by :-
(1) Meselson and Stahl
(2) Hershey and Chase
(3) Griffith
(4) Watson and Crick

TG: @Chalnaayaaar

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58. Viruses have :-
(1) DNA enclosed in a protein coat
(2) Prokaryotic nucleus
(3) Single chromosome
(4) Both DNA and RNA

59. Which one of the following living organisms completely *lacks* a cell wall?
(1) Cyanobacteria
(2) Sea – fan(Gorgonia)
(3) *Saccharomyces*
(4) Blue–green algae

AIPMT 2015

60. Which one one of the following matches is **correct** ?

(1)	Alternaria	Sexual reproduction absent	Deuteromycetes
(2)	Mucor	Reproduction by Conjugation	Ascomycetes
(3)	Agaricus	Parasitic fungus	Basidiomycetes
(4)	Phytophthora	Aseptate mycelium	Basidiomycetes

61. True nucleus is absent in :-
(1) *Mucor* (2) *Vaucheria*
(3) *Volvox* (4) *Anabaena*

62. Which one of the following is **not** an inclusion body found in prokaryotes ?
(1) Cyanophycean granule
(2) Glycogen granule
(3) Polysome
(4) Phosphate granule

63. The guts of cow and buffalo possess:
(1) *Chlorella* spp. (2) Methanogens
(3) Cyanobacteria (4) *Fucus* spp.

Re-AIPMT 2015

64. Which of the following structures is **not** found in prokaryotic cells?
(1) Plasma membrane (2) Nuclear envelope
(3) Ribosome (4) Mesosome

65. Choose the **wrong** statement :
(1) Yeast is unicellular and useful in fermentation
(2) *Penicillium* is multicellular and produces antibiotics
(3) *Neurospora* is used in the study of biochemical genetics
(4) Morels and truffles are poisonous mushrooms

66. Which of the following are **not** membrane-bound?
(1) Mesosomes (2) Vacuoles
(3) Ribosomes (4) Lysosomes

67. Cell wall is absent in :
(1) *Nostoc* (2) *Aspergillus*
(3) *Funaria* (4) Mycoplasma

68. In which group of organisms the cells walls form two thin overlapping shells which fit together ?
(1) Slime moulds (2) Chrysophytes
(3) Euglenoids (4) Dinoflagellates

69. Match the following list of microbes and their importance :

(a)	*Saccharornyces cerevisiae*	(i)	Production of imm unosuppr essive agents
(b)	*Monascus pur pure us*	(ii)	Ripening of Swiss cheese
(c)	*Trichoderma pofysporurn*	(iii)	Commercial production of ethanol
(d)	*Propioni ba cteri urn sharmanii*	(iv)	Production of blood cholesterol lowering agents

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(i)	(iv)	(ii)
(2)	(iii)	(iv)	(i)	(ii)
(3)	(iv)	(iii)	(ii)	(i)
(4)	(iv)	(ii)	(i)	(iii)

70. Chromatophores take part in :
(1) Respiration (2) Photosynthesis
(3) Growth (4) Movement

71. The structures that help some bacteria to attach to rocks and/or host tissues are :
(1) Holdfast (2) Rhizoids
(3) Fimbriae (4) Mesosomes

TG: @Chalnaayaaar

72. The imperfect fungi which are decomposers of litter and help in mineral cycling belong to:
(1) Ascomycetes (2) Deuteromycetes
(3) Basidiomycetes (4) Phycomycetes

73. Pick up the **wrong** statement :
(1) Nuclear membrane is present in Monera
(2) Cell wall is absent in Animalia
(3) Protista have photosynthetic and heterotrophic modes of nutrition
(4) Some fungi are edible

NEET-I 2016

74. Which one of the following statements is wrong ?
(1) Cyanobacteria are also called blue-green algae
(2) Golden algae are also called desmids
(3) Eubacteria are also called false bacteria
(4) Phycomycetes are also called algal fungi

75. Chrysophytes, Euglenoids, Dinoflagellates and Slime moulds are included in the kingdom:-
(1) Monera (2) Protista
(3) Fungi (4) Animalia

76. Which of the following is wrongly matched in the given table ?

	Microbe	Product	Application
(1)	*Trichoderrna polysporum*	Cyclosporin A	immunosup-pressive drug
(2)	*Monascus pur pure us*	Statins	lowering of blood cholesterol
(3)	*Streptococcus*	Streptokinase	removal of clot from blood vessel
(4)	*Clostridium bufylicum*	Lipase	removal of oil stains

77. The primitive prokaryotes responsible for the production of biogas from the dung of ruminant animals, include the :-
(1) Halophiles (2) Thermoacidiophiles
(3) Methanogens (4) Eubacteria

TG: @Chalnaayaaar

NEET-II 2016

78. Methanogens belong to :
(1) Dinoflagellates (2) Slime moulds
(3) Eubacteria (4) Archaebacteria

79. Select the **wrong** statement :
(1) Diatoms are chief producers in the oceans
(2) Diatoms are microscopic and float passively in water
(3) The walls of diatoms are easily destructible
(4) 'Diatomaceous earth' is formed by the cell walls of diatoms.

80. Select the **mismatch** :-
(1) Protists-Eukaryotes
(2) Methanogens-Prokaryotes
(3) Gas vacuoles-Green bacteria
(4) Large central vacoules - Animal cells

81. Select the **wrong** statement :-
(1) Cyanobacteria lack flagellated cells.
(2) *Mycoplasma* is a wall-less microorganism
(3) Bacterial cell wall is made up of peptidoglycan.
(4) Pilli and fimbriae are mainly involved in motility of bacterial cells

82. Match **Column–I** with **Column–II** and select the correct option using the codes given below

Column-I		Column-II	
(a)	Citric acid	(i)	Trichoderma
(b)	Cyclosporin A	(ii)	Clostridium
(c)	Statins	(iii)	Aspergillus
(d)	Butyric acid	(iv)	Monascus

Codes :

	(a)	(b)	(c)	(d)
(1)	(i)	(iv)	(ii)	(iii)
(2)	(iii)	(iv)	(i)	(ii)
(3)	(iii)	(i)	(ii)	(iv)
(4)	(iii)	(i)	(iv)	(ii)

83. Which of the following sets of diseases is caused by bacteria?
(1) Tetanus and mumps
(2) Herpes and influenza
(3) Cholera and tetanus
(4) Typhoid and smallpox

TG: @Chalnaayaaar

NEET (UG) 2017

84. Which of the following are found in extreme saline conditions ?
(1) Eubacteria
(2) Cyanobacteria
(3) Mycobacteria
(4) Archaebacteria

85. Select the mismatch :
(1) *Rhodospirillum* - Mycorrhiza
(2) *Anabaena* - Nitrogen fixer
(3) *Rhizobium* - Alfalfa
(4) *Frankia* - *Alnus*

86. Which of the following components provides sticky character to the bacterial cell ?
(1) Nuclear membrane
(2) Plasma membrane
(3) Glycocalyx
(4) Cell wall

87. Viroids differ from viruses in having;
(1) DNA molecules without protein coat
(2) RNA molecules with protein coat
(3) RNA molecules without protein coat
(4) DNA molecules with protein coat

88. Which of the following is correctly matched for the product produced by them ?
(1) *Methanobacterium* : Lactic acid
(2) *Penicillium notatum* : Acetic acid
(3) *Sacchromyces cerevisiae* : Ethanol
(4) *Acetobacter aceti* : Antibiotics

89. Which among the following are the smallest living cells, known without a definite cell wall, pathogenic to plants as well as animals and can survive without oxygen ?
(1) *Pseudomonas* (2) *Mycoplasma*
(3) *Nostoc* (4) *Bacillus*

NEET (UG) 2018

90. Which among the following is ***not*** a prokaryote?
(1) *Saccharomyces*
(2) *Mycobacterium*
(3) *Nostoc*
(4) *Oscillatoria*

TG: @Chalnaayaaar

91. Select the ***wrong*** statement :
(1) Cell wall is present in members of fungi and plantae
(2) Mushrooms belong to basidiomycetes
(3) Pseudopodia are locomotory and feeding structures in sporozoans
(4) Mitochondria are the powerhouse of the cell in all kingdoms except monera

92. After karyogamy followed by meiosis, spores are produced exogenously in
(1) *Neurospora*
(2) *Alternaria*
(3) *Agaricus*
(4) *Saccharomyces*

93. Oxygen is ***not*** produced during photosynthesis by
(1) Green sulphur bacteria
(2) *Nostoc*
(3) *Cycas*
(4) *Chara*

94. Which of the following organisms are known as chief producers in the oceans ?
(1) Dinoflagellates (2) Diatoms
(3) Cyanobacteria (4) Euglenoids

NEET (UG) 2019

95. Which of the following statements is **incorrect**?
(1) Morels and truffles are edible delicacies.
(2) *Claviceps* is a source of many alkaloids and LSD.
(3) Conidia are produced exogenously and ascospores endogenously.
(4) Yeasts have filamentous bodies with long thread-like hyphae.

96. Which of the following statements is **incorrect** ?
(1) Viroids lack a protein coat
(2) Viruses are obligate parasites
(3) Infective constituent in viruses is the protein coat
(4) Prions consist of abnormally folded proteins

97. *Thiobacillus* is a group of bacteria helpful in carrying out :
(1) Nitrogen fixation
(2) Chemoautotrophic fixation
(3) Nitrification
(4) Denitrification

98. Match **Column - I** with **Column - II.**

Column - I	**Column - II**
(a) Saprophyte	(i) Symbiotic association of fungi with plant roots
(b) Parasite	(ii) Decomposition of dead organic materials
(c) Lichens	(iii) Living on living plants or animals
(d) Mycorrhiza	(iv) Symbiotic association of algae and fungi

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iii)	(iv)
(2)	(iii)	(ii)	(i)	(iv)
(3)	(ii)	(i)	(iii)	(iv)
(4)	(ii)	(iii)	(iv)	(i)

NEET (UG) 2019 (ODISHA)

99. Match the organisms in column-I with habitats in column-II

Column-I	**Column-II**
(a) Halophiles	(i) Hot springs
(b) Thermoacidophiles	(ii) Aquatic environment
(c) Methanogens	(iii) Guts of ruminants
(d) Cyanobacteria	(iv) Salty area

Select the correct answer from the options given below :-
(1) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)
(2) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
(3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(4) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

100. Mad cow disease in catttle is caused by an organism which has :-
(1) inert crystalline structure
(2) abnormally folded protein
(3) free RNA without protein coat
(4) free DNA without protein coat

TG: @Chalnaayaaar

101. Which of the following statements is correct ?
(1) Lichens do not grow in polluted areas.
(2) Algal component of lichens is called mycobiont.
(3) Fungal component of lichens is called phycobiont
(4) Lichens are not good pollution indicators.

102. Which of the following bacteria reduce nitrate in soil into nitrogen ?
(1) *Nitrobacter* (2) *Nitrococcus*
(3) *Thiobacillus* (4) *Nitrosomonas*

103. Among the following pairs of microbes, which pair has both the microbes that can be used as biofertilizers?
(1) *Aspergillus* and *Rhizopus*
(2) *Rhizobium* and *Rhizopus*
(3) *Cyanobacteria* and *Rhizobium*
(4) *Aspergillus* and *Cyanobacteria*

104. Which of the following statements about methanogens is not correct?
(1) They can be used to produce biogas.
(2) They are found in the rumen of cattle and their excreta
(3) They grow aerobically and breakdown cellulose-rich food.
(4) They produce methane gas.

NEET (UG) 2020

105. Match the following columns and select the correct option.

Column - I	**Column - II**
(a) *Clostridium butylicum*	(i) Cyclosporin - A
(b) *Trichoderma polysporum*	(ii) Butyric Acid
(c) *Monascus purpureus*	(iii) Citric Acid
(d) *Aspergillus niger*	(iv) Blood cholesterol lowering agent

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(iii)	(ii)	(i)
(2)	(iii)	(iv)	(ii)	(i)
(3)	(ii)	(i)	(iv)	(iii)
(4)	(i)	(ii)	(iv)	(iii)

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106. Which of the following is correct about viroids?
(1) They have free DNA without protein coat.
(2) They have RNA with protein coat.
(3) They have free RNA without protein coat.
(4) They have DNA with protein coat.

107. Which of the following statements about inclusion bodies is **incorrect** ?
(1) These represent reserve material in cytoplasm.
(2) They are not bound by any membrane.
(3) These are involved in ingestion of food particles.
(4) They lie free in the cytoplasm.

NEET (UG) 2020 (COVID-19)

108. Inclusion bodies of blue- green, purple and green photosynthetic bacteria are :
(1) Contractile vacuoles
(2) Gas vacuoles
(3) Centrioles
(4) Microtubules

109. Which of the following is **incorrect** about Cynobacteria ?
(1) They are photoautotrophs
(2) They lack heterocysts
(3) They often form blooms in polluted water bodies
(4) They have chlorophyll A similar to green plants

110. For the commercial and industrial production of Citric Acid, which of the following microbes is used ?
(1) *Aspergillus niger*
(2) *Lactobacillus sp*
(3) *Saccharomyces cerevisiae*
(4) *Clostridium butylicum*

111. Cyclosporin A, used as immuno suppression agent, is produced from :
(1) *Monascus purpureus*
(2) *Saccharomyces cerevisiae*
(3) *Penicillium notatum*
(4) *Trichoderma polysporum*

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NEET (UG) 2021

112. Which of the following statements is **correct** ?
(1) Fusion of two cells is called Karyogamy.
(2) Fusion of protoplasms between two motile on non-motile gametes is called plasmogamy.
(3) Organisms that depend on living plants are called saprophytes.
(4) Some of the organisms can fix atmospheric nitrogen in specialized cells called sheath cells.

113. Match **List - I** with **List - II.**

List-I		List-II	
(a)	*Aspergillus niger*	(i)	Acetic Acid
(b)	*Acetobacter aceti*	(ii)	Lactic Acid
(c)	*Clostridium butylicum*	(iii)	Citric Acid
(d)	*Lactobacillus*	(iv)	Butyric Acid

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(i)	(iv)	(ii)
(2)	(i)	(ii)	(iii)	(iv)
(3)	(ii)	(iii)	(i)	(iv)
(4)	(iv)	(ii)	(i)	(iii)

NEET (UG) 2022

114 Given below are two statements :
Statement I:
Mycoplasma can pass through less than 1 micron filter size.
Statement II:
Mycoplasma are bacteria with cell wall
In the light of the above statements, choose the **most appropriate** answer from the options given below:
(1) Both **Statement I** and **Statement II** are incorrect
(2) **Statement I** is correct but **Statement II** is incorrect
(3) **Statement I** is incorrect but **Statement II** is correct
(4) Both **Statement I** and **Statement II** are correct

115. Which of the following is a **correct** statement?

(1) Bacteria are exclusively heterotrophic organisms.

(2) Slime moulds are saprophytic organisms classified under Kingdom Monera.

(3) Mycoplasma have DNA, Ribosome and cell wall

(4) Cyanobacteria are a group of autotrophic organisms classified under Kingdom Monera.

Re-NEET (UG) 2022

116. Mad cow disease in cattle and Cr Jacob disease in humans are due to infection by_____ .

(1) Bacterium (2) Virus

(3) Viroid (4) Prion

EXERCISE-II (Previous Year Questions) ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	4	3	4	3	3	2	1	2	2	1	3	4	3	3	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	3	2	4	2	2	3	3	3	4	2	3	2	1	3	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	1	4	4	1	2	2	2	1	1	2	1	2	2	1	3
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	2	2	3	4	4	1	B	2	1	1	2	3	1	2	1
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	4	3	2	2	4	3	4	2	2	2	3	2	1	3	2
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	4	3	4	3	4	4	4	3	4	1	3	3	3	2	1
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	3	3	1	2	4	3	4	4	1	2	1	3	3	3	3
Question	106	107	108	109	110	111	112	113	114	115	116				
Answer	3	3	2	2	1	4	2	1	2	4	4				

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Exercise - III Master Your Understanding

EXERCISE-III (A) NCERT BASED QUESTIONS

1. Archaebacteria differ from other bacteria in having a:-
(1) Different cell wall and cell membrane structure
(2) Different cellular organization
(3) Parasitic nature
(4) Both (2) and (3)

2. Nitrogen fixing cyanobacteria are :-
(1) *Rhizobium, Nostoc*
(2) *Rhizobium, Anabaena*
(3) *Nostoc, Anabaena*
(4) *Anabaena, Azolla*

3. The vast majority of bacteria are :-
(1) Symbiotic (2) Autotrophic
(3) Heterotrophic (4) Nitrogen fixing

4. Which character indicates that Cyanobacteria are similar to higher green plants ?
(1) Type of cell wall
(2) Nitrogen fixation ability
(3) Presence of chlorophyll 'a'
(4) Presence of gelatinous sheath

5. Typhoid and tetanus are caused by :-
(1) Bacteria (2) Virus
(3) Viroids (4) Fungi

6. Which one of the following prokaryotes lack cell wall?
(1) Virus (2) Cyanobacteria
(3) Mycoplasma (4) Protozoa

7. According to five kingdom classification protista includes :-
(1) Chrysophytes, Dinoflagellates, Protozoans
(2) Diatoms, Euglenoids, Virus
(3) Dinoflagellates, Protozoans, Red algae
(4) Chrysophytes, Bryophytes, Protozoans, Slime mould

8. Which organisms have silica in their cell wall?
(1) Dinoflagellates (2) Slime mould
(3) Diatoms (4) Euglenoids

9. Which organism is responsible for red surface of sea?
(1) *Euglena* (2) *Gonyaulax*
(3) *Amoeba* (4) Paramoecium

10. Which unicellular, photosynthetic eukaryote lacks cell wall ?
(1) Mycoplasma (2) *Amoeba*
(3) *Euglena* (4) Slime mould

11. Orange rots (Rotten fruit) disease is caused by :-
(1) Bacterium (2) Fungi
(3) *Citrus* (4) Mycoplasma

12. Select incorrect statement about fungi ?
(1) The cell walls are composed of chitin and polysaccharides
(2) These are heterotrophic organisms
(3) They are autotrophic organsism
(4) They are absorptive in nature

13. In fungi, vegetative reproduction takes place by
(1) Fragmentation (2) Conidia
(3) Zygospore (4) Oospore

14. In ascomycetes and basidomycetes, the dikaryotic cell is :-
(1) Haploid (2) Diploid
(3) Triploid (4) Polyploid

15. Which of the following is not a member of class phycomycetes ?
(1) *Albugo* (2) *Mucor*
(3) *Rhizopus* (4) *Neurospora*

16. The mycelium is aseptate and coenocytic in:-
(1) Phycomycetes (2) Basidiomycetes
(3) Deuteromycetes (4) Ascomycetes

17. Septate and branched mycelium is found in:-
(1) Basidiomycetes (2) Deuteromycetes
(3) Ascomycetes (4) All the above

18. Select correct matched pair / pairs :-
(1) *Claviceps* – Ascomycetes
(2) Morels – Ascomycetes
(3) *Agaricus* – Basidiomycetes
(4) All the above

19. Asexual reproduction takes place by conidia formation in :-
(1) *Aspergillus* (2) *Penicillium*
(3) *Colletotrichum* (4) All the above

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20. Which of the following are examples of unicellular algae ?
(1) *Chlamydomonas* (2) *Riccia*
(3) *Chlorella* (4) Both (1) & (3)

21. Which of the following are not considered in five kingdom system of classification ?
(1) Lichen (2) Virus
(3) Viroid (4) All the above

22. The name virus that means venom or poisonous fluid was given by :-
(1) Pasteur (2) Ivanowsky
(3) Stanley (4) Both (2) & (3)

23. Viroid was discovered by :-
(1) Haeckel (2) Pasteur
(3) T.O. Diener (4) Theophrastus

24. Bacteriophages are generally :-
(1) ss DNA virus (2) ds DNA virus
(3) ss RNA virus (4) ds RNA virus

25. Select true statement :-
(1) Viruses are obligate parasites
(2) In Lichens, algal component is called phycobiont
(3) In Lichens, Fungal component is called mycobiont
(4) All the above

26. Which group shows the most extensive metabolic diversity ?
(1) Plantae (2) Animalia
(3) Monera (4) Fungi

27. Archaebacteria differ from other bacteria in:-
(1) Nucleoid
(2) Composition of cell wall
(3) Composition of cytoplasm
(4) Composition of genetic material

28. Which group of organisms is responsible for the production of biogas from the dung of cows and buffaloes ?
(1) *Methanomonas* (2) Methanogens
(3) Cyanobacteria (4) *Mycoplasma*

29. Choose the correct statement :-
(1) Most of the bacteria are autotrophs
(2) All bacteria are heterotrophs
(3) Some bacteria are heterotrophs
(4) Most of the bacteria are heterotrophs

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30. Which of the following character is common in both cyanobacteria and green plants ?
(1) Cell wall composition
(2) Presence of chlorophyll 'a'
(3) Presence of heterocyst
(4) Presence of 80s ribosome

31. *Nostoc* can fix atmospheric nitrogen in specialised cell, called :-
(1) Chromotophore (2) Zoospore
(3) Heterocyst (4) Oospore

32. Which process is not performed by bacterial activity?
(1) Production of antibiotics
(2) Fixing nitrogen in legumes
(3) Making curd from milk
(4) Production of pseudomycelium

33. Choose the incorrect statement regarding *Mycoplasma* :-
(1) They lack cell wall
(2) They are smallest living cell
(3) They can survive without oxygen
(4) They have mesosome for respiration

34. Which are chief producers of oceans ?
(1) Diatoms (2) Dinoflagellates
(3) Euglenoid (4) Green algae

35. Which organism is responsible for making the sea appear red by rapid multiplication ?
(1) *Euglena* (2) *Paramoecium*
(3) *Gonyaulax* (4) *Trypanosoma*

36. Euglenoids have a protein rich layer instead of a cell wall. This layer is called as :-
(1) Epidermis (2) Skin
(3) Pellicle (4) Middle layer

37. Choose the incorrect statement from following:
(1) Dinoflagellates have stiff cellulosic plates on the outer surface
(2) Euglenoids have two flagella, one lies longitudinally and the other transversely
(3) Slime mould spores are dispersed by air currents
(4) In diatoms, the cell walls form two thin overlapping shells, which fit together as in a soap box.

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38. Which group of organisms is used to make bread and beer ?
(1) *Rhizopus* (2) *Yeast*
(3) *Albugo* (4) *Neurospora*

39. Fungus prefers to grow in :-
(1) Warm and humid places
(2) Cold and humid places
(3) Warm and cold both
(4) Warm, cold and humid places

40. In fungi when the hyphae are continuous and branched tubes and fibled with multi-nucleated cytoplasm, these are called:-
(1) Unicellular hyphae
(2) Coenocytic hyphae
(3) Multicellular hyphae
(4) Both (1) and (3)

41. In fungi sexual reproduction is by :-
(1) Fragmentation, Ascospores and Basidiospores
(2) Budding, Conidia, and Basidiospores
(3) Oospores, Ascospores and Basidiospores
(4) Fission, Zoospores, Oospores

42. Mycelium of members of phycomycetes is:-
(1) Septate and coenocytic
(2) Aseptate and coenocytic
(3) Septate and multicellular
(4) Septate and unicellular

43. Choose the incorrect statement about phycomycetes :-
(1) Members are found in aquatic habitats
(2) Spores are endogenously produced in sporangium
(3) Zygospore is formed by reduction division
(4) Its members reproduce sexually may be isogamous, anisogamous or oogamous.

44. Which fungus is used extensively in biochemical and genetic work ?
(1) *Agaricus*
(2) *Aspergillus*
(3) *Claviceps*
(4) *Neurospora*

45. Choose the incorrect statement about ascomycetes :-
(1) Mycelium is branched and septate
(2) Sexual spores are produced endogenously
(3) They have sac like structure in which karyogamy takes place
(4) Reduction division occurs in fruiting bodies and form conidia

46. Which group of organism is related with basidiomycetes ?
(1) Mushroom, *Ustilago*, *Aspergillus*
(2) Puffballs, *Agaricus*, *Aspergillus*
(3) Mushroom, *Ustilago*, *Agaricus*
(4) *Ustilago*, *Aspergillus*, *Agaricus*

47. Which set of diseases is caused by members of basidiomycetes ?
(1) Rust and smut
(2) Ergot and smut
(3) Ergot and rust
(4) Citrus canker and rust

48. Fungi imperfacti are called,
(1) members of phycomycetes
(2) members of ascomycetes
(3) members of basidiomycetes
(4) members of deuteromycetes

49. Which is not found in members of deuteromycetes ?
(1) Asexual reproduction
(2) Mode of nutrition
(3) Structure of mycelium
(4) Sexual reproduction

50. Which of the following are noncellular organisms that are characterized by having an inert crystalline structure outside the living cell:-
(1) Bacteria (2) *Mycoplasma*
(3) Virus (4) Lichen

51. Select false statement :-
(1) Lichens are symbiotic association between algae & fungi
(2) Viruses are smaller than bacteria
(3) Virus name are obligate parasites
(4) Viruses are facultative parasite

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52. Select incorrect statement about viroid :-
(1) Free infectious RNA
(2) It was discovered by T.O. Diener
(3) It causes potato spindle tuber disease
(4) It contains high molecular weight RNA

53. Which is incorrect statement ?
(1) The *Mycoplasma* are organisms that completely lack a cell wall
(2) *Mycoplasma* can survive without oxygen
(3) *Mycoplasma* are the smallest living cells.
(4) *Mycoplasma* can cause disease only in plants

54. Generally plant viruses are :-
(1) Double stranded DNA viruses
(2) Single stranded RNA viruses
(3) Single stranded DNA viruses
(4) Double stranded RNA viruses

EXERCISE-III(B) ANALYTICAL QUESTIONS

55. What is correct for stages of *Puccinia* ?
(1) Telia and aecia on wheat
(2) Telia and uredo stage on wheat
(3) Telia and aecia on barberry
(4) None

56. Modern farmer's can increase the yield of Paddy upto 50% by the use of :-
(1) Cyanobacteria
(2) *Rhizobium*
(3) Cyanobacteria in *Azolla pinnata*
(4) Farm yard manure

57. Plant pathogenic bacteria are mostly :-
(1) Gram + Non spore forming
(2) Gram - Negative non spore forming
(3) Gram + spore forming
(4) Gram (-) spore forming

58. Nitrogen fixing bacteria convert :-
(1) $N_2 \rightarrow NH_3$ (2) $NH_4^+ \rightarrow$ Nitrates
(3) $NO_2 \rightarrow NO_3$ (4) $NO_3 \rightarrow N_2$

59. Main reason of water bloom in rivers, lakes, sea etc. is:-
(1) Brown algae and green algae
(2) Cyanobacteria and dinoflagellates
(3) *Eichornia*
(4) Fishes

60. Genetic material of prokaryotic cell:-
(1) Non histonic double stranded DNA
(2) Histonic double stranded DNA
(3) Histone & DNA both are absent
(4) Histone without DNA

61. Diatomaceous earth is used as heat insulator in boilers and steam pipes because the cell wall of diatom -
(1) Composed of Iron
(2) Composed of Silicon dioxide
(3) Is conductor of heat
(4) Is bad conductor of electricity

62. Enzymes are not found in-
(1) Fungi (2) Algae
(3) Virus (4) Cyanobacteria

63. Plant Decomposers belong to :-
(1) Monera and fungi
(2) Fungi and plants
(3) Protista and Animalia
(4) Animalia and Monera

64. Which fungal disease spreads by seed and flowers ?
(1) Loose smut of Wheat
(2) Corn stunt
(3) Covered smut of Barley
(4) Soft rot of Potato

65. Which bacteria is utilized in Gober gas plant ?
(1) Methanogens
(2) Nitrifying bacteria
(3) Ammonifying bacteria
(4) Denitrifying bacteria

66. In bacteria, plasmid is :-
(1) Extra chromosomal material
(2) Main DNA
(3) Non functional DNA
(4) Repetative gene

67. Sequence of which of the following is used to know the phylogeny :-
(1) m-RNA (2) r – RNA
(3) t - RNA (4) DNA

68. In five kingdom system, the main basis of classification :-
(1) Structure of nucleus
(2) Nutrition
(3) Structure of cell wall
(4) Asexual reproduction

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69. Organisms which obtain energy by the oxidation of reduced inorganic compounds are called
(1) Photo autotrophs
(2) Chemo autotrophs
(3) Saprozoic
(4) Coproheterotrophs

70. Which one of the following bacteria has found extensive use in genetic engineering work in plants:-
(1) *Clostridium septicum*
(2) *Xanthomonas citri*
(3) *Bacillus coagulens*
(4) *Agrobacterium tumefaciens*

71. In which kingdom would you classify the archaea and nitrogen-fixing organisms, if the five-kingdom system of classification is used:-
(1) Plantae (2) Fungi
(3) Protista (4) Monera

72. Which one pair of examples will correctly represent the grouping Spermatophyta according to one of the schemes of classifying plants :-
(1) *Acacia*, Sugarcane
(2) *Pinus, Cycas*
(3) *Rhizopus, Triticum*
(4) *Ginkgo, Pisum*

73. Which one of the following pairs of plants are not seed producers ?
(1) *Fern* and *Funaria*
(2) *Funaria* and *Ficus*
(3) *Ficus* and *Chlamydomonas*
(4) *Punica* and *Pinus*

74. In oogamy, fertilization involves :-
(1) A large motile female gamete and a small non–motile male gamete
(2) A small non–motile female gamete and a large motile male gamete
(3) A large non–molile female gamete and a small motile male gamete
(4) A large non–motile female gamete and a large non–motile male gamete

75. Flagella of prokaryotic and eukaryotic cells differ in :-
(1) Microtubular organization and function
(2) Type of movement and placement in cell
(3) Location in cell and mode of functioning
(4) Microtubular organization and type of movement

76. If by radiation all nitrogenase enzyme are inactivated, then there will be no :-
(1) Conversion from ammonium to nitrate in soil
(2) Fixation of nitrogen in legumes
(3) Fixation of atmospheric nitrogen
(4) Conversion from nitrate to nitrite in legumes

77. Which one of the following pairs is not correctly matched ?
(1) *Rhizobium* – Biofertilizer
(2) *Streptomyces* – Antibiotic
(3) *Serratia* – Drug addiction
(4) *Spirulina* – Single cell protein

78. A free living nitrogen–fixing cyanobacterium which can also form symbiotic association with the water fern *Azolla* is :-
(1) *Anabaena* (2) *Tolypothrix*
(3) *Chlorella* (4) *Nostoc*

79. Carbohydrates, the most abundant biomolecules on earth, are produced by :
(1) some bacteria, algae and green plant cells
(2) all bacteria, fungi and algae
(3) fungi, algae and green plant cells
(4) viruses, fungi and bacteria

80. Barophilic prokaryotes :
(1) occur in water containing high concentrations of barium hydroxide.
(2) readily grow and divide in sea water enriched in any soluble salt of barium
(3) grow and multiply in very deep marine sediments
(4) grow slowly in highly alkaline frozen lakes at high altitudes

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81. Auxospores and hormocysts are formed, respectively, by :
(1) Several diatoms and a few cyanobacteria
(2) Some diatoms and several cyanobacteria
(3) Several cyanobacteria and several diatoms
(4) Some cyanobacteria and many diatoms

82. Which of the following is non-cellular organism?
(1) Bacteria (2) Fungi
(3) Algae (4) Virus

83. Find the **incorrect** match :-

Column-I		Column-II
(1)	*Ustilago*	belongs to class basidiomycetes
(2)	*Agaricus*	belongs to class basidiomycetes
(3)	*Trichoderma*	sexual cycle is found
(4)	*Alternaria*	sexual cycle is not found

84. Find the **incorrect** statement about fungi :-
(1) They show a great diversity in morphology and habitats
(2) Fungi are cosmopolitan and occur in air, water, soil and as parasites also
(3) They prefer to grow in cold and dry places
(4) With the exception of yeasts, fungi are filamentous

85. Find the **correct** statements about fungi :-
(A) Most of the fungi are saprophytes
(B) Fungi can also survive as symbionts
(C) Sexual reproduction in fungi involves three steps
(D) Reduction division in fungi occurs in fruiting bodies which forms haploid spores
(1) A, B are correct
(2) C, D are correct
(3) A, B & C are correct
(4) A, B, C & D are correct

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86. Choose the **incorrect** statement regarding decomposer :-
(1) They may be prokaryotes or eukaryotes.
(2) They may be unicellular or multicellular
(3) They convert inorganic into organic compounds
(4) They play a great role in ecology

87. With respect to fungal sexual cycle, what is the correct sequence ?
(1) Karyogamy, plasmogamy & meiosis
(2) Meiosis, plasmogamy & karyogamy
(3) Plasmogamy, karyogamy & meiosis
(4) Meiosis, karyogamy & plasmogamy

88. In prokaryotes, chromatophores are –
(1) Specialized granules responsible for colouration of cells
(2) Structures responsible for organizing the shape of the organism
(3) Inclusion bodies lying free inside the cells for carrying out various metabolic activities
(4) Internal membrane systems that may become extensive and complex in photosynthetic bacteria

89. All eukaryotic unicellular organisms belong to-
(1) Monera (2) Protista
(3) Fungi (4) Bacteria

90. The five kingdom classification was proposed by-
(1) R.H. Whittaker (2) C.Linnaeus
(3) A. Roxberg (4) Virchow

91. Organisms living in salty areas are called as
(1) Methanogens
(2) Halophiles
(3) Heliophytes
(4) Thermoacidophiles

92. Naked cytoplasm, multinucleated and saprophytic are the characteristics of
(1) Monera (2) Protista
(3) Fungi (4) Slime molds

93. An association between roots of higher plants and fungi is called-
(1) Lichen (2) Fern
(3) Mycorrhiza (4) BGA

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94. A dikaryon is formed when
(1) Meiosis is arrested
(2) The two haploid nuclei do not fuse immediately
(3) Cytoplasm does not fuse
(4) None of the above

95. *Contagium vivum fluidum* was proposed by
(1) D.J. Ivanowsky (2) M.W. Beijerinek
(3) Stanley (4) Robert Hook

96. Mycobiont and Phycobiont are found in
(1) Mycorrhiza (2) Root
(3) Lichens (4) BGA

97. Difference between Virus and Viroid is
(1) Absence of protein coat in viroid but present in virus
(2) Presence of low molecular weight RNA in virus but absent in viroid
(3) Both a and b
(4) None of the above

98. With respect to fungal sexual cycle, choose the correct sequence of events
(1) Karyogamy, Plasmogamy and Meiosis
(2) Meiosis, Plasmogamy and Karyogamy
(3) Plasmogamy, Karyogamy and Meiosis
(4) Meiosis, Karyogamy and Plasmogamy

99. Viruses are non-cellular organisms but replicate themselves once they infect the host cell. To which of the following kingdom do viruses belong to?
(1) Monera (2) Protista
(3) Fungi (4) None of the above

100. Members of phycomycetes are found in
i. Aquatic habitats
ii. On decaying wood
iii. Moist and damp places
iv. As obligate parasites on plants
Choose from the following options
(1) None of the above (2) i and iv
(3) ii and iii (4) All of the above

101. Cyanobacteria are classified under
(1) Protista (2) Plantae
(3) Monera (4) Algae

102. Fusion of two gametes which are dissimilar in size is termed as
(1) Oogamy (2) Isogamy
(3) Anisogamy (4) Zoogamy

103. Which of the following criterion was not used for classification of fungi?
(1) Structure of mycelium
(2) Structure of fruiting body
(3) Complexity of cell wall
(4) Mode of spore formation

104. In which kingdom would you classify the archaebacteria and nitrogen-fixing organisms. If the five-kingdom system of classification is used ?
(1) Monera (2) Plantae
(3) Fungi (4) Protista

105. How many kingdoms include prokaryotic organisms only, in three domain classification?
(1) one (2) three
(3) two (4) four

106. A bacterium is able of withstand extreme heat, dryness, and toxic chemical this indicates that it is probably able to form :
(1) Endospore
(2) Thick peptidoglycan wall
(3) Capsule
(4) Toxins

107. Heterocysts as specialized cells to fix atmospheric nitrogen are produced by–
(1) *Rhodospirillum* and *Nostoc*
(2) *Anabaena* and *Azolla*
(3) *Nostoc* and *Anabaena*
(4) *Rhodopseudomonas* and *Oscillatoria*

108. Which of the following are the characters of dinoflagellates?
(i) They are planktonic golden yellow algae with soap box like structure.
(ii) They are marine red biflagellated protista.
(iii) They appear yellow, green, brown, blue and red in colour.
(iv) They are biflagellated organisms with pellicle.
(v) They are saprophytic (or) parasitic unicellular forms.
(1) (ii) and (iii) (2) (ii) and (v)
(3) (i), (ii) and (iii) (4) (ii), (iv) and (v)

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109. Gametangial copulation process of sexual reproduction occurs in
(1) Oomycetes (2) Ascomycetes
(3) Basidiomycetes (4) Zygomycetes

110. Which statement is incorrect regarding fungi
(1) Stored food is glycogen and oil
(2) Fungi are haploid in nature
(3) Higher Fungi are more advanced than lower fungi in complexity of sex organs.
(4) Haplontic life cycle and zygotic meiosis occurs in most of the fungi

111. Match column I with column II and choose the right option

Column I	Column II
A. Ascomycetes	(i) Rhizopus
B. Basidiomycetes	(ii) Penicillium
C. Deuteromycetes	(iii) Ustilago
D. Phycomycetes	(iv) Alternaria

(1) A-(iv), B-(iii), C-(i), D-(ii)
(2) A-(ii), B-(iii), C-(iv), D-(i)
(3) A-(iv), B-(i), C-(ii), D-(iii)
(4) A-(iii), B-(iv), C-(ii), D-(i)

112. Which of the following is not a sexual spore
(a) Sporangiospore (b) Ascospore
(c) Basidiospore (d) Oospore
(e) Zygospore
(1) (a), (b) and (c) (2) only (a)
(3) (b), (c) and (d) (4) (d) and (e)

113. Which of the following group of kingdom protista is beingdescribed in the statements given below ?
(i) This group includes diatoms and golden algae.
(ii) They are microscopic and float passively in water currents (plankton).
(iii) Most of them are photosynthetic.
(iv) They have deposits in their habitat; this accumulation over billion of years is referred to as 'diatomaceous earth'.
(1) Dinoflagellates (2) Chrysophytes
(3) Euglenoids (4) Slime moulds

114. The given statements are some characters of a particular group of Kingdom protista.
(i) Most of them are fresh water organisms found in standing water.
(ii) They have a protein rich layer (called pellicle) which makes their body flexible.
(iii) They have two flagella, a short and a long one.
(iv) Though they are photosynthetic in the presence of sunlight, but in the absence of sunlight they behave like heterotrophs by predating on other smaller organisms.
Identify the correct group on the basis of these characters.
(1) Protozoans (2) Chrysophytes
(3) Slime moulds (4) Euglenoids

115. Which of the following statement(s) is/are correct about ascomycetes ?
(i) *Neurospora*, which is used in biochemical and genetic work is a member of this class.
(ii) They are mostly multicellular, *e.g.*, Yeast, or rarely unicellular, *e.g., Penicillium*.
(iii) They are saprophytic, decomposers, parasitic or coprophilous.
(iv) Some examples are Aspergillus, Claviceps and Neurospora.
(1) Both (i) and (ii) (2) Only (ii)
(3) (i), (iii) and (iv) (4) All of these

116. Which of the following statement(s) is/are correct about class basidiomycetes ?
(i) They are commonly known as imperfect fungi because only the asexual or vegetative phases of these fungi are known.
(ii) They grow in soil, on logs and tree stumps and in living plant bodies as parasites, e.g., rusts and smuts.
(iii) The mycelium is branched and septate.
(iv) Some common members are Agaricus, Ustilago and Puccinia.
(1) Only (i) (2) Both (ii) and (iii)
(3) (ii), (iii) and (iv) (4) All of these

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117. **Assertion :** Euglena can be placed in the plant kingdom due to the presence of chlorophyll.
Reason : Euglena cannot be classified on the basis of two kingdom system of classification.
(1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
(2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
(3) If Assertion is true but Reason is false.
(4) If both Assertion and Reason are false.

118. **Assertion :** Outside a living cell, viruses have must crystalline statements.
Reason : Viroids have a protein coat.
(1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
(2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
(3) If Assertion is true but Reason is false.
(4) If both Assertion and Reason are false.

119. **Assertion :** TMV is a virus which causes mosaic disease.
Reason : TMV has RNA as genetic material.
(1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
(2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
(3) If Assertion is true but Reason is false.
(4) If both Assertion and Reason are false.

120. **Assertion :** Yeasts such as Saccharomyces cerevisiae are used in baking industry.
Reason : Carbon dioxide produced during fermentation causes bread dough to rise by thermal expansion.
(1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
(2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion.
(3) If Assertion is true but Reason is false.
(4) If both Assertion and Reason are false.

121. Match the terms given in column-I with their examples given in column-II and choose the correct option

Column-I (Terms)	**Column-II (Examples)**
A. Ascus	I. *Spirulina*
B. Basidium	II. *Penicillium*
C. Protista	III. *Agaricus*
D. Cyanobacteria	IV. *Euglena*
E. Animalia	V. *Sponges*

(1) A – II, B – III, C – IV, D – V, E – I
(2) A – I, B – II, C – III, D – V, E – IV
(3) A – II, B – V, C – III, D – I, E – IV
(4) A – II, B – III, C – IV, D – I, E – V

122. Given below are two statements:
Statement-I : Fungi and members of the Monera and Protista having cell walls have now been excluded from Plantae, although according to earlier classifications they were placed in the same kingdom.
Statement-II : The earliest systems of classification used only gross superficial morphological characters such as habit, colour, number and shape of leaves etc.
In the light of the above statements, choose the most appropriate answer from the options given below:
(1) Both Statement-I and Statement-II are correct.
(2) Both Statement-I and statement-II are incorrect.
(3) Statement-I is correct but Statement-II is incorrect.
(4) Statement-I is incorrect but Statement-II is correct.

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123. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Cyanobacteria that are referred to as blue green algae are not "algae" anymore.

Reason (R) : All unicellular prokaryotes are placed in kingdom Monera and algae are placed in kingdom Plantae

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) & (R) are correct but (R) is not the correct explanation of (A).

(2) (A) is correct but (R) is not correct.

(3) (A) is not correct but (R) is correct.

(4) Both (A) & (R) are correct and (R) is the correct explanation of (A).

EXERCISE-III ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	1	3	3	3	1	3	1	3	2	3	2	3	1	1	4
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	1	4	4	4	4	4	1	3	2	4	3	2	2	4	2
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	3	4	4	1	3	3	2	2	1	2	3	2	3	4	4
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	3	1	4	4	3	4	4	4	2	2	3	2	1	2	1
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	2	3	1	1	1	1	2	2	2	4	4	4	1	3	4
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	2	3	1	1	3	1	4	3	3	4	3	3	4	2	1
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	2	4	3	2	2	3	1	3	4	4	3	3	3	1	3
Question	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
Answer	1	3	1	4	3	2	2	2	4	3	3	2	3	1	3
Question	121	122	123												
Answer	4	1	4												